

## Patent Claims

- 5 1. Method for the control of the temperature of feed air which is injected into a cabin zone of a passenger aircraft (10), whereby the cabin (18) of the aircraft is subdivided into a plurality of cabin zones which are respectively supplied with specially temperature-controlled feed air, whereby with this method, the temperature of the feed air injected into each cabin zone is controlled dependent upon a deviation of an  
10 injection temperature actual value, measured by sensor, of the feed air injected into the cabin zone is question from an injection temperature target value, whereby for a part of the cabin zones, the injection temperature target value is established by comparing an ambient temperature actual value, measured by sensor, for the ambient temperature in the cabin zone in question with an ambient temperature  
15 target value,  
characterised in that for at least a first cabin zone, the injection temperature target value of this first cabin zone is established on the basis of the injection temperature target value and/or the injection air actual temperature ( $T_L$ ) of at least one second cabin zone different from the first, whereby every second cabin zone is a zone with  
20 measurement by sensor of the ambient temperature actual value of the second cabin zone in question.
2. Method in accordance with claim 1,  
characterised in that the injection temperature target value for the first cabin zone is  
25 established upon the basis of the injection temperature target values and/or the injection temperature actual values ( $T_L$ ) of several, and in particular of all second cabin zones.
3. Method in accordance with claim 2,  
30 characterised in that the injection temperature target value of the first cabin zone is established upon the basis of an average value of the injection temperature target values and/or the injection temperature actual values of several, and in particular all second cabin zones.
- 35 4. Method in accordance with any of the previous claims,  
characterised in that the injection temperature target value for the first cabin zone is also established upon the basis of at least one correction value for this cabin zone.

5. Method in accordance with claim 4,  
characterised in that the injection temperature target value of the first cabin zone is  
established upon the basis of a first correction value which is pre-determined for this  
cabin zone.

6. Method in accordance with claim 4 or 5,  
characterised in that the injection temperature target value for the first cabin zone is  
established upon the basis of a second correction value which is dependent upon an  
ambient temperature target value for this cabin zone which can be entered manually.

7. Method for the control of the temperature of feed air which is injected into the  
cabin zone of a passenger aircraft (10), whereby the cabin (18) of the aircraft  
is sub-divided into several cabin zones which are respectively supplied with  
specially temperature-controlled feed air, whereby , in the method, the  
temperature of the feed air injected into each cabin zone is controlled  
dependent upon a deviation of an injection temperature actual value of the  
feed air injected into the cabin zone in question, measured by sensor, from an  
injection temperature target value,  
characterised in that, for at least one cabin zone, the injection temperature target  
value for this cabin zone is established upon the basis of a temperature ( $T_A$ ),  
measured by sensor, for the external surrounds of the aircraft (10).

8. Method in accordance with claim 7,  
characterised in that the injection temperature target value for the one cabin zone is  
also established upon the basis of at least one correction value for this cabin zone.

9. Method in accordance with claim 8,  
characterised in that the injection temperature target value for the one cabin zone is  
established upon the basis of a first correction value which is pre-determined for this  
cabin zone.

10. Method in accordance with claim 8 or 9,  
characterised in that the injection temperature target value of the one cabin zone is  
established upon the basis of a second correction value which is dependent upon an  
ambient temperature target value for this cabin zone which can be entered manually.

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11. Passenger aircraft, the cabin of which (18) is sub-divided into several cabin zones supplied with specially temperature-regulated feed air, including an electronic control unit (24) arranged to control, for each cabin zone, the temperature of the injected feed air dependent upon a deviation of an injection temperature actual value, measured by sensor, in relation to an injection temperature target value, and establish the injection temperature target value for a part of the cabin zones by comparing an ambient temperature actual value for the ambient temperature in the cabin zone in question, measured by sensor, with an ambient temperature target value,

characterised in that the control unit is arranged to establish, at least for the first cabin zone, the injection temperature target value for this first cabin zone, upon the basis of the injection temperature target value and/or of the injection temperature actual value ( $T_L$ ) of at least a second cabin zone, different from the first, whereby every second cabin zone is a zone with measurement by sensor of the ambient temperature actual value of the second cabin zone in question.

12. Passenger aircraft, the cabin of which (18) is sub-divided into several cabin zones, respectively supplied with specially temperature-regulated feed air, including an electronic control unit (24) arranged to control the temperature of the injected feed air for each cabin zone, dependent upon a deviation of an injection temperature actual value of the feed air injected into the cabin zone in question, measured by sensor, in relation to an injection temperature target value, characterised in that the control unit is arranged to establish, for at least one cabin zone, the injection temperature target value for this cabin zone, upon the basis of a temperature ( $T_A$ ) of the external surrounds of the aircraft (10), measured by sensor.